

### **REMARKS**

In the Office action mailed on September 1, 2005, the Examiner considered claims 1-31. Claim 19 was objected to as lacking sufficient antecedent basis; claims 1-4, 6, 8, 10-14, 23, and 25 were rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,921,920 to Kazakevick ("Kazakevick"); claims 5, 7, 9, and 21 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Kazakevick; claims 15, 18-20 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Kazakevick in view of U.S. Patent Application Publication No. U.S. 2003/0235800 to Qadar ("Qadar"); claims 16-17 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Kazakevich in view of Qadar and U.S. Patent Application Publication No. 2003/0141507 to Krames et al. ("Krames"); claim 22 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Kazakevich in view of U.S. Patent No. 5,680,492 to Hopler et al. ("Hopler"); claim 24 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Kazakevich in view of U.S. Patent No. 6,318,887 to Matsumoto ("Matsumoto"); and claims 26-31 were rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,932,599 to Hartung ("Hartung").

Applicants respectfully submit the present Amendment and Response, in which claims 1 to 15, 21 to 26, 29, and 30 are amended, claims 16-20 are cancelled without prejudice, and claims 32-37 are introduced. Support for these amendments can be found at, for example, originally-filed claims 1-26 and pages 10 and 13 of the originally-filed specification. Applicants respectfully submit that no new matter is introduced by the present Amendment and Response.

In view of the amendments to the claims and the following remarks, Applicants respectfully requests reconsideration and withdrawal of all grounds of rejection and objection.

#### ***Telephone Conference with the Examiner***

Applicants thank the Examiner for participating in a telephone conference with Applicants' agent, Deborah Vernon, and one of the inventors, Robert Krupa on November 28, 2005. Participants discussed the pending independent claims and the references cited by the Examiner in the outstanding Office action. Specifically, participants discussed Applicants' lack of an encasement and/or coupling gel within claimed devices.

***Objections to Claim 19***

Examiner objected to claim 19 because the limitation “the dome lens” lacked sufficient antecedent basis. In the present Amendment and Response claim 19 has been cancelled. Applicants believe that the cancellation of claim 19 addresses all of Examiner’s objections and thus request that all claim objections be withdrawn.

***Rejection of Claims 1-4, 6, 8, 10-14, 23, and 25 under 35 U.S.C. § 102(e)***

Independent claims 1 and 25 and dependent claims 2-4, 6, 8, 10-14, and 23 stand rejected under 35 U.S.C. § 102(e) as being anticipated by Kazakevich. For a claim to be anticipated under 35 U.S.C. § 102(b), the cited reference must teach or suggest each and every element of Applicants’ claim(s). Applicants respectfully submit that Kazakevich does not disclose every element of Applicants’ independent claim 1 and/or claim 25.

As amended, both claims 1 and 25 claim a light coupling device. One of the elements claimed in both claims 1 and 25 is a solid state light-emitting device free of or without an encasement disposed thereabout. By eliminating the encasement, Applicants’ device has the advantage of directly accessing and thus coupling a light emitting surface of the solid state light-emitting device to the light guide. For example, see page 10 and FIG. 1 of Applicants’ originally-filed application, which discloses the removal of a plastic lens and coupling gel in order to achieve maximum coupling between an emitting phosphor coated surface of and LED chip 700 and a bundle of polished light guide fibers 200. Applicants respectfully submit that Kazakevich fails to teach or suggest at least this element of Applicants’ claimed invention.

Kazakevich discloses a solid state light source including a semiconductor light source and an optical fiber element. See, Abstract of Kazakevich. Kazakevich’s solid state light source includes a pair of holes drilled into the top and bottom surfaces of an epoxy encasement 40 for insertion of an optic fiber 6. See, for example, column 4, lines 51-62 and FIGS. 2A, 2B, 3, and 6. As a result, Kazakevich fails to teach or suggest a solid state light-emitting device without an encasement disposed thereabout, because Kazakevich discloses a solid state light source including an epoxy encasement including holes drill therein. Accordingly, Applicants submit that claim 1 and claim 25 are patentable because Kazakevich fails to teach or suggest a light

coupling device including a solid state light source without an encasement disposed thereabout, as claimed by Applicants.

Claims 2-4, 6, 8, 10-14, and 23 depend directly or indirectly from independent claim 1 and thus are patentable at least for the same reasons claim 1 is patentable.

***Rejection of Claims 5, 7, 9, 15-22, 24, and 26-31 under 35 U.S.C. § 103(a)***

Claims 5, 7, 9, 15-22, 24, and 26-31 stand rejected under 35 U.S.C. § 103(a) as being unpatentable in view at least one of the following references: Kazakevich, Qadar, Krames, Hopler, Matsumoto, and Hartung. To establish a prima facie case of obviousness 1) there must be a motivation to combine the references, 2) there must be a reasonable expectation of success, and 3) the combination must teach or suggest all of the elements of Applicants' claims. Applicants respectfully submit that a prima facie case for obviousness has not been established at least because none of the cited references teach or suggest all of the elements of Applicants claims as amended. Accordingly, Applicants respectfully request reconsideration and removal of the 35 U.S.C. § 103(a) rejection of claims 5, 7, 9, 24, and 26-31.

Applicants independent claims 1, 25, 26, 29, and 30 each include a solid state light-emitting device without an encasement disposed thereabout. Applicants respectfully submit that none of the cited references teach or suggest a solid state light-emitting device without an encasement disposed thereabout (e.g., without a dome lens, dome cover, or epoxy encasement). Specifically, Qadar discloses a curing light formed of an array of LEDs. See, for example, Abstract of Qadar. Each of the LEDs includes a dome cover as shown in FIGS. 4A, 4B, 4C, 6A, and 6B. Krames discloses a photonic crystal light emitting diode. See, for example, Abstract of Krames. Krames' LED as shown in FIG. 13 and described in paragraph [0120] includes a dome lens. Hopler discloses a gradient index lens that couples light from a single fiber optic into a fiber bundle or directly into the input port of an illumination device. See, for example, Abstract of Hopler. Hopler's disclosed illumination device includes a xenon arc source 108 as shown in FIGS. 2 and 4 of Hopler. As a result, Hopler fails to even teach or suggest a solid state light source. Moreover, by definition, a gas arc light source includes an encasement to contain the gas therein. Matsumoto discloses a light source arrangement for an endoscope. See, for example, Abstract of Matsumoto. The light source includes an LED 18 including a dome shaped focusing

lens 22 surrounding the LED 18. See, FIG. 2B and column 3, lines 24-30 of Matsumoto.

Hartung discloses a radiation device including an array of LEDs 12 each including a dome shaped lens. As a result, Applicants respectfully submit that each of the cited references fails to teach or suggest a solid state light emitting device without an encasement disposed thereabout because each of the references discloses a light source including an encasement (e.g., a dome shaped lens, dome cover, or gas arc lamp encasement). Thus, Applicants request that the 35 U.S.C. §103 rejections of claims 5, 7, 9, 24, and 26-31 be withdrawn since none of the cited references teaches or suggests this element which appears in each of Applicants' independent claims.

#### ***New Claims 32-37***

Applicants have introduced a new independent claim 32 and dependent claims 33-37. Independent claim 32 is directed to a light coupling device. The light coupling device includes a light-emitting device including a substantially flat light-emitting surface, the substantially flat light-emitting surface being at least substantially free of a coupling gel or index-matching material; and a light guide having a proximal light receiving end and a distal transmitting end, the proximal end being optically coupled to the substantially flat light-emitting surface and the distal end spaced farther from the light-emitting device. Applicants respectfully submit that claim 32 is patentable over all of the references cited by the Examiner and discussed above at least because none of these references teach or suggest the proximal end of a light guide being optically coupled to a substantially flat light-emitting surface which is at least substantially free of a coupling gel or index-matching solution. Accordingly, Applicants respectfully submit claim 32 and its dependent claims 33-37 are patentable.

**CONCLUSION**

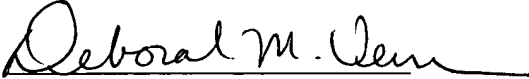
In view of the foregoing, Applicants respectfully submit that the claims 1-15 and 21-37 are in condition for allowance and request favorable action. The Examiner is invited to contact Applicants' agent at the number below if in the Examiner's view it would expedite the examination of the application.

The Commissioner is hereby authorized to charge any fee occasioned by the entry of this paper to Attorney's Deposit Account No. 50-3081.

Respectfully submitted,

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Date

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